IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AFFYMETRIX, INC., Plaintiff/Counter-Defendant, v. ILLUMINA, INC., Defendant/Counter-Plaintiff.	C.A. No. 04-901-JJF **PUBLIC VERSION**

DECLARATION OF ROBIN A. FELDER, PH.D. IN SUPPORT OF THE OPPOSITION OF AFFYMETRIX, INC. TO ILLUMINA, INC.'S MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF THE ASSERTED CLAIMS OF THE '531 PATENT

MORRIS, NICHOLS, ARSHT & TUNNELL LLP
Jack B. Blumenfeld (#1014)
Maryellen Noreika (#3208)
1201 N. Market Street
P.O. Box 1347
Wilmington, DE 19899-1347
(302) 658-9200
Attorneys for Plaintiff/Counter-Defendant Affymetrix, Inc.

OF COUNSEL:

Michael J. Malecek
Daniel R. Reed
Andrea L. Gross
AFFYMETRIX, INC.
6550 Vallejo Street, Suite 100
Emeryville, CA 94608
(510) 428-8500

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I, Robin A. Felder, declare as follows:

1. I am a Professor of Pathology and Associate Director of Clinical Chemistry and Toxicology at the University of Virginia in Charlottesville, Virginia. I am also Director of the Medical Automation Research Center at the University of Virginia.

2. A copy of my curriculum vitae is attached as Exhibit A to this Declaration.

3. I hold a Bachelor's of Science Degree from the College of William and Mary. I received a Ph.D. in Biochemistry from Georgetown University in 1983, and performed a postdoctoral fellowship at the National Institutes of Health in 1983-1984. My thesis related to the biochemistry of the cellular second messenger signaling mechanisms.

4. I am the author of approximately 145 scientific articles in refereed journals and have published over 35 scientific reviews and book chapters. I have been an invited lecturer at more than 100 meetings, events, and conferences. Over the course of

my career, my research has been supported in part by more than 40 grants. Currently, I am conducting research as part of a $10,200,000 grant from the National Heart Lung and Blood Institute Project on Dopamine and Angiotension Receptor Interactions, where we are performing genetic analysis on DNA obtained from over 2,000 subjects.

5. I am the named inventor on 11 U.S. Patents, including U.S. Patent No. 6,660,474, "G Protein-Related Kinase" (which describes molecular DNA techniques), U.S. Patent No. 5366896, "Robotically Operated Laboratory System," and U.S. Patent No. 5631844, "Interactive Remote Sample Analysis System."

6. I am Founder and former president of the Association for Laboratory Automation ("ALA"), and founder and former Editor in Chief of its journal. The ALA is an international multi-disciplinary organization of scientists and business professionals devoted to the advancement of automation and technology education in today's laboratories. I am a member of more than 40 committees, editorial boards, and similar organizations; I am a Fellow of the National Academy of Clinical Biochemistry and Chair of the American Association of Clinical Chemistry Annual Laboratory Automation Conference scheduled for 2007.

7. I have been retained by Affymetrix to testify in this case. I am being compensated for my work at my usual rate of S210 per hour for research and $410 per hour for depositions.

8. I have read and am familiar with U.S. Patent No. 5,545,531 (the "'531 patent.") I have also read and am familiar with the PCT Patent Application WO 93/17126 (the "'126 PCT application"), a copy of which is attached hereto as Exhibit B. I base my opinions in this declaration on my review of these materials, as well as on my

background and experience as a biochemist, in molecular diagnostics, in molecular biology, and as an expert in laboratory automation.

9. I understand that Illumina asserts in this litigation that the '126 PCT application discloses all of the elements of claims 1 – 4 of the '531 patent. In my opinion, this is not correct.

10. The '126 PCT application describes a "sectioned array." (*See, e.g.* Exh. B at IAFP00013427-28). It is my opinion that a "sectioned array" as used in the '126 PCT application includes only one oligonucleotide sequence per well. Therefore, it does not include a plurality of probe arrays.

11. The '126 PCT application also depicts, in Figure 7, a "survey array" laying on top of a "partialing array." (Exh. B at IAFP00013518). It is my opinion that the '126 PCT application does not describe any method for attaching and providing adequate contact between the "survey array" and the "partialing array," in order to allow sufficient hybridization to occur. It is also my opinion that the '126 PCT application does not describe any method for applying a material resistant to the flow of a liquid sample so as to surround the arrays of the "survey array." Figure 7 and the related text provide no guidance as to how the "partialing array" would isolate or surround the arrays of the "survey array."

12. Figure 7 and the related text also do not describe the exposure of the probe arrays to the spaces of the wells of the "partialing array." The purpose of that exposure, as discussed in the '531 patent, is to allow hybridization to occur. There is no discussion regarding how hybridization could take place between the "survey array" and the "partialing array" in the '126 PCT application.

13. For at least these reasons, in my opinion, the '126 PCT application does not disclose each of the elements of the claims of the '531 patent.

I declare under penalty of perjury of the laws of the United States of America that the foregoing is true and correct.

Executed July 28, 2006, in Charlottesville, Virginia.

Robin A Felder 7/28/06

Robin A. Felder, Ph.D.

CERTIFICATE OF SERVICE

I hereby certify that on July 28, 2006, I electronically filed the foregoing document using CM/ECF which will send notification of such filing(s) to the following:

Richard K. Herrmann
Morris, James, Hitchens & Williams LLP

I also certify that copies were caused to be served on July 28, 2006 upon the following in the manner indicated:

BY HAND

Richard K. Herrmann
Morris, James, Hitchens & Williams LLP
222 Delaware Avenue, 10th Floor
P.O. Box 2306
Wilmington, DE 19899-2306

BY EMAIL AND FEDERAL EXPRESS

Marcus E. Sernel
Kirkland & Ellis LLP
200 East Randolph Drive
Chicago, IL 60601

/s/ Maryellen Noreika (#3208)
Maryellen Noreika (#3208)
1201 N. Market Street
P. O. Box 1347
Wilmington, DE 19899-1347
(302) 658-9200
mnoreika@mnat.com

CERTIFICATE OF SERVICE

I hereby certify that on August 11, 2006, I electronically filed the foregoing document using CM/ECF which will send notification of such filing(s) to the following:

Richard K. Herrmann
Morris, James, Hitchens & Williams LLP

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BY HAND

Richard K. Herrmann
Morris, James, Hitchens & Williams LLP
222 Delaware Avenue, 10th Floor
P.O. Box 2306
Wilmington, DE 19899-2306

BY EMAIL AND FEDERAL EXPRESS

Marcus E. Sernel
Kirkland & Ellis LLP
200 East Randolph Drive
Chicago, IL 60601

/s/ Benjamin J. Schladweiler
Benjamin J. Schladweiler (#4601)
1201 N. Market Street
P. O. Box 1347
Wilmington, DE 19899-1347
(302) 658-9200
bschladweiler@mnat.com